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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/470,852	12/23/1999	CHAE-HUN CHUNG	YOOPN376-	6686

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EXAMINER

DUONG, DUC T

ART UNIT	PAPER NUMBER
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2663

DATE MAILED: 03/17/2004

11

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/470,852

Applicant(s)

CHUNG ET AL.

Examiner

Duc T. Duong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 February 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,3-7,11-13,17 and 20 is/are allowed.
- 6) ☒ Claim(s) 2,8-10,14-16,18 and 19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Claim Objections

1. Claims 2, 3, and 15 are objected to because of the following informalities: In claim 2, line 3, the phrase "more than one channel **element**" should be pluralized to "**elements**"; also in claim 2, line 5, the phrase "more than one channel **card**" should be pluralized to "**cards**"; and in claim 3, line 4, the period "." after the word "and" should be deleted; in claim 15, line 14, the hyphen "-" before the word "an" should be deleted.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 2, 8-10, 14-16, 18, and 19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 2 and 9 recites the limitation "the same" in lines 10 and 13, respectively. There is insufficient antecedent basis for this limitation in the claim. It is also unclear as to what is meant by "the QPS-modulating the same" in claim 2, lines 9-10 and "the QPS-demodulating the same" in claim 9, lines 13-14.

Regarding to claims 8-10 and 16, the preamble of the claim called for a method, but the claim depended on an apparatus.

Regarding to claim 14, line 6, it is unclear as to what is meant by "modulating a pilot 5 channel".

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Regarding to claim 15, line 3, it is unclear as to what is meant by "one channel 20 element".

Regarding to claim 18, line 15, it is unclear as to what is meant by "modulates 25 a communication channel".

Regarding to claim 19, line 14, it is unclear as to what is meant by "second clock 25 signal".

Allowable Subject Matter

4. Claims 1-20 are allowed.

The following is a statement of reasons for the indication of allowable subject matter: The prior art of record fails to teach or make obvious the step or means for "a clock signal generation unit for receiving a 10 MHz, TOD, and 1 PPS signal from a GPS receiving unit and generating a 1st even second clock signal in synchronously with the 1PPS and a 2nd even second clock signal which is obtained by delaying the 1st even second clock signal by a maximum bi-directional propagation delay time between a base station and a relay unit", when such clock signal generating unit is considered within the specific structure of the device recited in claims 1, 7, 19, and 20 or methods recited in claims 6 and 12. The prior art of record fails to teach or make obvious the step or means for "a 1st signal processing unit for receiving the 1st even second clock signal from the clock signal generation unit, modulating a pilot channel, a synchronous channel and a call channel of a forward link from the base station to a mobile station by expediting by the maximum bi-directional propagation delay time and detecting and demodulating an access channel of the backward link from the mobile station to the

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base station in synchronization with 1st even second clock signal", when such clock signal generating unit is considered within the specific structure of the device recited in claim 13 or method claim 18.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Duc T. Duong whose telephone number is 703-605-5146. The examiner can normally be reached on M-Th (8:30 AM-5:30 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau T. Nguyen can be reached on 703-308-5340. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-9600.

DD



STEVEN H.D NGUYEN
PRIMARY EXAMINER